



FALL 2018

*Retrofitting NYC's Small Homes*





Pratt Center works for a more just, equitable, and sustainable city for all New Yorkers



**ENERGY EFFICIENCY**

Dramatically expanding residential energy efficiency



**URBAN MANUFACTURING**

Strengthening the industrial sector and protecting the well-paying jobs it provides



**COMMUNITY PLANNING, TRANSPORTATION EQUITY & RESILIENCY**

Empowering communities to plan for and realize their futures



**EQUITY IN THE INNOVATION ECONOMY**

Advancing equity and inclusion in the innovation sector

EnergyFit tested a standard measures program design for encouraging energy efficiency retrofits of 1-4 family buildings in NYC.

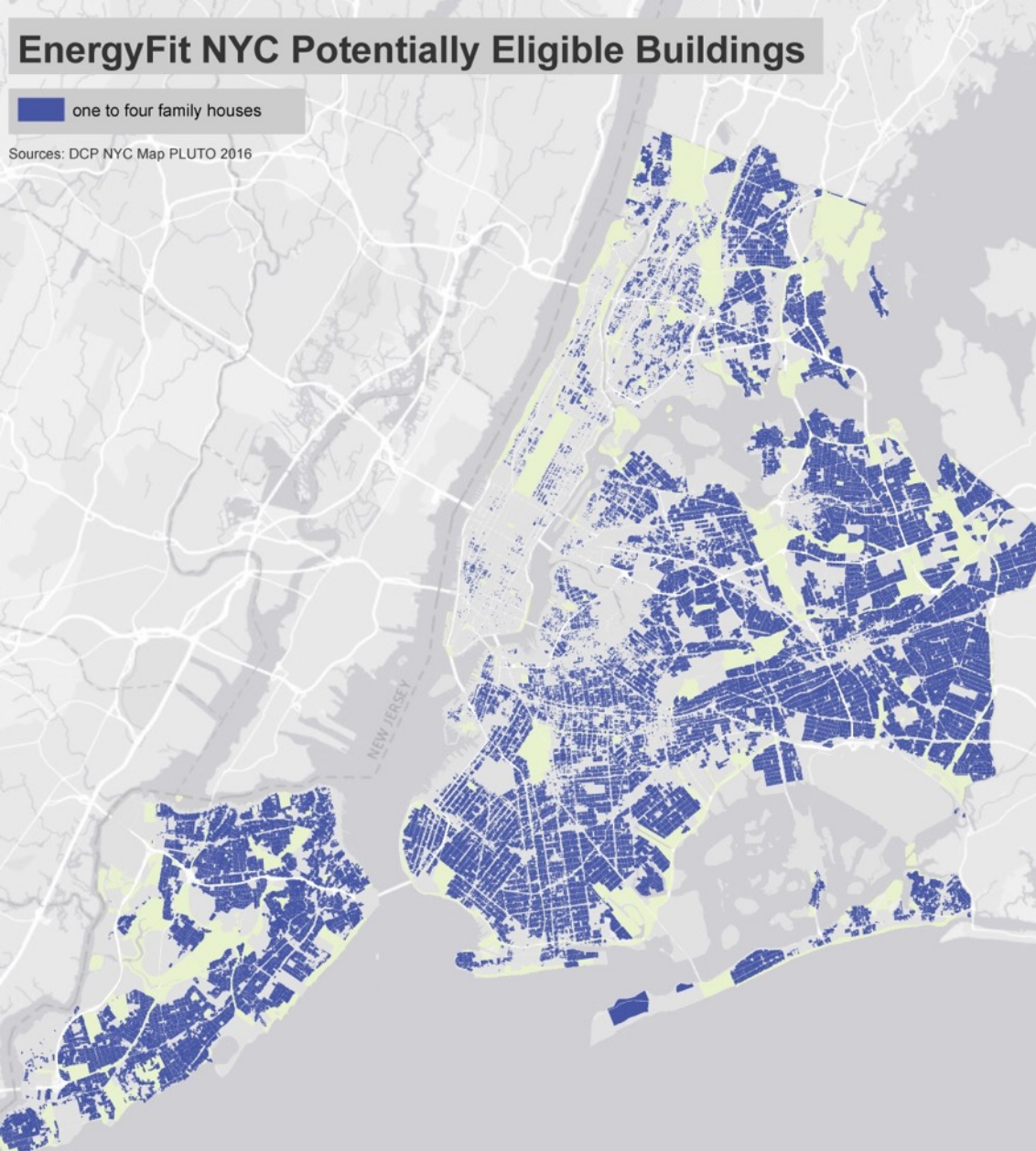


- Why EnergyFit?
- Brief pilot overview
- Recommendations

## EnergyFit NYC Potentially Eligible Buildings

one to four family houses

Sources: DCP NYC Map PLUTO 2016



# 863,867

1-4 Family Buildings in NYC

**29%** low-income

**36%** moderate-income

**35%** higher income

**19% of NYC's building  
carbon emissions**

## Existing Retrofit Programs have not addressed the NYC market

	New York State	New York City	NYC as % of Total
Total Number of Projects	49,717	861	<b>1.73%</b>
Assisted Home Performance (AHPwES)	20,688	463	2.24%
Home Performance (HPwES)	29,029	398	1.37%

Source: NYS Open Data, Residential Existing Homes (1-4 units) Energy Efficiency Projects with Income based Incentives by Customer Type: Beginning 2010

## Barriers to participation

1. Complexity of retrofit process
2. Cost/limited incentives
3. Health & safety issues
4. Time



Model an energy retrofit program for NYC's 1-4 family homes that leverages the uniqueness of this building stock and understands the needs of NYC homeowners

- Dramatically scale the number of residential retrofits in NYC's dense low- and moderate-income communities through a standardized retrofit approach
- Enable homeowners to easily and efficiently reduce energy consumption and costs, and address health and safety issues
- Create a model that can be expanded into a citywide program

- Building typology: 1-2 family, pre-1930s, gas-heated, masonry, attached homes
- Each home had the same package of energy efficiency measures installed
- 32 buildings received retrofit





Priority tiered air sealing and weather stripping of the building



Air sealing and insulating the roof hatch



Air sealing and insulating the attic cavity



Health and safety tests and improvements

## Post retrofit:

- 1 year post-retrofit energy usage monitoring;
- quarterly homeowner surveying



## Offer a Standard Package of retrofit measures

- 1. **Clearly explained, pre-determined** energy efficiency measures widely needed in the targeted building typology.
- 2. Tiered options
- 3. Consistent, structured pricing based on income levels; incentives included in price
- 4. Short walk-through evaluation; no energy modeling

BASIC \$	MODERATE \$\$	ADVANCED \$\$\$
<ul style="list-style-type: none"><li>• Lighting</li><li>• Air Sealing &amp; Weather stripping</li><li>• Low flow fixtures</li><li>• Programmable thermostat</li></ul>	Basic package + <ul style="list-style-type: none"><li>• Attic air sealing and insulation</li></ul>	Moderate package+ <ul style="list-style-type: none"><li>• Additional energy efficiency measures/equipment</li></ul>

Add ons: ASHP, Triple Paned Windows, High Efficiency Boiler etc.

## Simplify the homeowner engagement process

1. Reduced timeline and number of decision points
2. One continuous point of contact for advisement and support
3. More robust support for local energy advisors
4. Shared database for program administrators
5. Coordination and communication between State and City incentives



## Elevate the importance of Health & Safety in program design and communication

1. Increased direct messaging on health and safety
2. Funding for health and safety fixes for low- and moderate-income households




## Address additional barriers particular to moderate-income households

- Offer a more nuanced, sliding scale incentive structure

Current Offering	
<60% AMI	Free
60-80% AMI	50% Cost share
>80% AMI	No incentive

EXAMPLE EnergyFit Offering	
<60% AMI	Free
60-75% AMI	20% Cost Share
75-90% AMI	40% Cost Share
90-105% AMI	60% Cost Share
105-120% AMI	80% Cost Share
>120% AMI	No incentive

A black silhouette map of New York City is overlaid on a background image of a brick building with windows. The map is filled with small white icons representing energy efficiency measures, such as light bulbs, fans, and solar panels.

It is time for a **NYC-focused residential energy efficiency program**, specifically designed to leverage the opportunities that arise from NYC's **unique 1-4 family housing stock**, and **crafted for the families** who live in and own these buildings.